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HONEYWELL INTERNATIONAL INC. 101 COLUMBIA ROAD P O BOX 2245 MORRISTOWN, NJ 07962-2245			EXAMINER	
			GRAYBILL, DAVID E	
			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/005,633	SLEMMONS ET AL.
	Examiner David E Graybill	Art Unit 2827

-- Th MAILING DATE of this communication app ars on the cover sh et with the corresponcence address --

Office Action Summary

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If the reply is filed after the period specified above, a reply within the statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set time period will result in abandonment of the application. See 37 CFR 1.133(b).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 16 July 2003.
2a) This action is FINAL. 2b) This action is non-final.
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 25-28,31,32,36,39 and 43-48 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 25-28,31,32,36,39 and 43-48 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) Other: _____

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The reply filed on 7-16-3 is not fully responsive to the prior Office Action because applicant has failed to explicitly include an identification of the species that are elected. Specifically, applicant has elected particular claims, but this is improper because claims are never species. Still, from the totality of the record it is reasonably clear that applicant intended to elect the species wherein the release layer is selected from the group consisting of polyimide and parylene, and the species wherein the bump is gold.

Because the response appears to be bona fide, but through an apparent oversight or inadvertence the response is incomplete, and in order to continue to afford applicant the benefit of compact prosecution, the requirement to complete the response within a one month time limit is waived, and the claims are examined on the merits.

Applicant's apparent election with traverse of the species wherein the release layer is selected from the group consisting of polyimide and parylene, and wherein the bump is solder in the response filed 7-16-3 is acknowledged. The traversal appears to be that claims 25 and 43 are generic. This is not found persuasive because it is not relevant to the propriety of the restriction of the species. Furthermore, the reasons for insisting on restriction as stated in MPEP 808 have been clearly met.

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The requirement is still deemed proper and is therefore made FINAL.

See 37 CFR 1.142(b) and MPEP § 821.03.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 25-28, 31, 32, 36, 39 and 43-48 are rejected under 35

U.S.C. 112, first paragraph, as based on a disclosure which is not enabling because the specification at page 12, lines 14-18, teaches as critical or essential to the practice of the invention precisely controlling the adhesion characteristics of the interface between the release layer and the microbeam so that the release of the microbeam may be accomplished without undo stress to the projection at the IC bond pad or deformation of the microbeam; but the claims are not so limited. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

Claims 25-28, 31, 32, 36, 39 and 43-48 are rejected under 35

U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The undescribed subject

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matter of the claimed invention is the limitations, "wherein the carrier is a tape automated bonding (TAB) carrier," "wherein the carrier is a tape automated bonding (TAB) carrier and said release layer is formed from a material selected from the group consisting of polyimide and parylene," and "a release layer."

To determine adequacy of written description for original claims MPEP 2163IIA2(a) (redacted) instructs:

- (i) For Each Claim Drawn to a Single Embodiment Or Species:
 - (A) Determine whether the application describes an actual reduction to practice of the claimed invention.
 - (B) If the application does not describe an actual reduction to practice, determine whether the invention is complete as evidenced by a reduction to drawings or structural chemical formulas that are sufficiently detailed to show that applicant was in possession of the claimed invention as a whole.
 - (C) If the application does not describe an actual reduction to practice or reduction to drawings or structural chemical formula as discussed above, determine whether the invention has been set forth in terms of distinguishing identifying characteristics as evidenced by other descriptions of the invention that are sufficiently detailed to show that applicant was in possession of the claimed invention.
 - (1) Determine whether the application as filed describes the complete structure (or acts of a process) of the claimed invention as a whole.
 - (2) If the application as filed does not disclose the complete structure (or acts of a process) of the claimed invention as a whole, determine whether the specification discloses other relevant identifying characteristics sufficient to describe the claimed invention in such full, clear, concise, and exact terms that a skilled artisan would recognize applicant was in possession of the claimed invention. Any claim to a species that does not meet the test described under at least one of (a), (b), or (c) must be rejected as lacking adequate written description under 35 U.S.C. 112, para. 1.
- ii) For each claim drawn to a genus:

The written description requirement for a claimed genus may be satisfied through sufficient description of a representative number of species by actual reduction to practice (see i)(A), above), reduction to drawings (see i)(B), above), or by disclosure of relevant, identifying characteristics, i.e., structure or other physical and/or chemical properties, by functional characteristics coupled with a known or disclosed correlation between function and structure, or by a combination of such identifying characteristics, sufficient to show the applicant was in possession of the claimed genus (see i)(C), above).

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Regarding the species limitations "wherein the carrier is a tape automated bonding (TAB) carrier," and "wherein the carrier is a tape automated bonding (TAB) carrier and said release layer is formed from a material selected from the group consisting of polyimide and parylene," the instant application does not describe an actual reduction to practice of the claimed invention; the invention is not complete as evidenced by a reduction to drawings or structural chemical formulas that are sufficiently detailed to show that applicant was in possession of the claimed invention as a whole; the invention has not been set forth in terms of distinguishing identifying characteristics as evidenced by other descriptions of the invention that are sufficiently detailed to show that applicant was in possession of the claimed invention; the application as filed does not describe the complete structure of the claimed invention as a whole; and the specification does not disclose other relevant identifying characteristics sufficient to describe the claimed invention in such full, clear, concise, and exact terms that a skilled artisan would recognize applicant was in possession of the claimed invention.

Regarding the generic limitation "a release layer," there is insufficient original description of a representative number of species by actual reduction to practice, reduction to drawings, or by disclosure of relevant, identifying characteristics, i.e., structure or other physical and/or chemical properties,

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by functional characteristics coupled with a known or disclosed correlation between function and structure, or by a combination of such identifying characteristics, sufficient to show the applicant was in possession of the claimed genus. Also, there is insufficient original description to show that applicant was in possession of a release layer as commonly defined as a layer that contains a bond inhibiting material or parting material used to prevent adhesion between laminae in areas that might otherwise bond in the absence of the layer. See Manual of Classification, Class Definitions, Class 428, Subclass 41.8.

Claims 25-28, 31, 32, 36, 39 and 43-48 are rejected under 35 U.S.C. 112, first paragraph, because the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims.

Specifically, the specification does not reasonably provide enablement for the claimed genus "a release layer." The claimed genus is not enabled because the release layer is claimed in terms of the method of making it coupled with its properties and functions, and there is no disclosed or otherwise known correlation or relationship between the properties and functions of the release layer genus and its composition or structure. To

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further clarify, although it is disclosed that particular release layer composition species have the claimed properties and functions, there is no disclosure that the claimed properties and functions define a particular film composition species or genus. In addition, the invention involves unpredictable chemical reactions, and absent a statement applicable to the genus as a whole, it is indeterminable from the disclosure of the particular species what other species will work; hence, it is indeterminable what other species are members of the genus. As a result, a person skilled in the art could not make the release layer genus as a whole without undue experimentation. Chemical reactivity is a most unpredictable and empirical art and it is well settled that the requirement that the claims be commensurate in scope with the enabling disclosure is particularly stringent in this area of technology. See *In re Doumani* 126 USPQ 408, *In re Grant* 134 USPQ 248, *In re Fisher* 166 USPQ 18, *Mobil Oil Corporation v. W. R. Grace and Company* 180 USPQ 418, *In re Slocombe* 184 USPQ 740, *In re Mercier* 185 USPQ 774, *Corona Cord Tire Company v. Dovan Chemical Corporation* 192 CD 255 and *In re Hawkins* 174 USPQ 157.

Claim 25-28, 31, 32, 36, 39 and 43-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contains subject matter which was not described in the

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specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The undescribed subject matter is an automated bonding (TAB) carrier, and a release layer as commonly defined as a layer that contains a bond inhibiting material or parting material used to prevent adhesion between laminae in areas that might otherwise bond in the absence of the layer.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 25-28, 31, 32, 36, 39 and 43-48 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 25, 26 and 39 the scope of the term "release layer" is unclear because the term appears to be given a meaning repugnant to its usual meaning of a layer that contains a bond inhibiting material or parting material used to prevent adhesion between laminae in areas that might otherwise bond in the absence of the layer, as defined in the Manual of Classification, Class Definitions, Class 428, Subclass 41.8. Specifically, in the claims, the release layer is not used to prevent adhesion because it is adhered "bonded" to the microbeam laminae.

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In claims 26 and 48 the scope of the term "tape automated bonding (TAB) carrier" is unclear because there is no art recognized definition of the term, and it is not otherwise explicitly defined in the disclosure.

In claims 28, 39 and 43-46 the scope of the term "fan-out conductors" is unclear because there is no art recognized definition of the term, and it is not otherwise explicitly defined in the disclosure.

In claim 43 there is insufficient antecedent basis for the language "conductor microbeams."

In claim 48 there is insufficient antecedent basis for the language "said release."

In the rejections infra, reference labels are generally recited only for the first recitation of identical elements.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject

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matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 25, 27, 28, 31, 32, 36, 39 and 43-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Hatada (4784972).

At column 3, line 30 to column 4, line 63, Hatada teaches the following:

A microbeam assembly adapted to form interconnects between integrated circuit bond pads and substrate contacts, the microbeam assembly comprising: a carrier 10; a release layer located on said carrier, said release layer being etchable; and a plurality of conductive microbeams 12 releasably bonded to said release layer, wherein the conductive

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microbeams are sized and spaced to mate with the bond pads 14 of an integrated circuit 16, and wherein said microbeams are inherently releasable from said carrier by at least partially etching away said release layer, wherein the carrier is inherently substantially rigid, wherein the carrier comprises fan-out conductors 12b for electrical testing of an integrated circuit, wherein at least one microbeam comprises a bump 12A, wherein the bump is comprised of solder, wherein said fan-out conductors are located on a first region of said carrier and said release layer is located on a second region of said carrier, wherein said conductive microbeams are releasably bonded to said release layer and are in electrical communication with said fan-out conductors for electrical testing of an integrated circuit connection to the microbeams.

A microbeam assembly adapted to form interconnects between integrated circuit bond pads and substrate contacts, the microbeam assembly comprising: a carrier; a plurality of fan-out conductors located on a first region of said carrier; a release layer located on a second region of said carrier; a plurality of conductive microbeams located on said release layer, wherein each of said conductor microbeams is in electrical communication with at least one of said fan-out conductors, wherein said fan-out conductors are located on a first region of said carrier and said

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release layer is located on a second region of said carrier and at least partially surrounds said fan-out connectors, wherein at least one of said conductive microbeams is located on said release layer and extends at least partially onto one of said fan-out conductors, wherein at least one of said fan-out conductors is adjacent to said release layer and at least one of said conductive microbeams is located on said release layer and extends at least partially onto one of said fan-out conductors, wherein said release layer is inherently etchable and said microbeams being releasable from said carrier by at least partially etching away said release layer.

To further clarify the teaching wherein said release layer is inherently etchable and said microbeams being inherently releasable from said carrier by at least partially etching away said release layer, as cited, Hatada teaches that the release layer is Pt and Pd, and Pt and Pd are inherently capable of being etched. Furthermore, the microbeams are inherently capable of being released from the carrier by at least partially etching away the release layer because the microbeams are releasably bonded to the release layer and complete etching of the release layer would release the microbeams from the carrier.

Although Hatada does not appear to explicitly teach wherein the at least one microbeam further comprises a solder dam, this is a statement of

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intended use of the microbeam which does not result in a structural difference between the claimed microbeam and the microbeam of Hatada. Further, because the microbeam of Hatada has the same structure as the claimed microbeam, it is inherently capable of being used as a solder dam, and the statement of intended use does not patentably distinguish the claimed microbeam from the microbeam of Hatada. Similarly, the manner in which a product operates is not germane to the issue of patentability of the product; *Ex parte Wikdahl* 10 USPQ 2d 1546, 1548 (BPAI 1989); *Ex parte McCullough* 7 USPQ 2d 1889, 1891 (BPAI 1988); *In re Finsterwalder* 168 USPQ 530 (CCPA 1971); *In re Casey* 152 USPQ 235, 238 (CCPA 1967). Also, "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim.;" *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). And, "Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims.;" *In re Young*, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 136 USPQ 458, 459 (CCPA 1963)). And, claims directed to product must be distinguished from the prior art in terms of structure rather than function. *In re Danley*, 120 USPQ 528, 531 (CCPA 1959). "Apparatus claims cover what a device is, not what a

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device does [or is intended to do]." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990).

Although Hatada does not appear to explicitly teach wherein the carrier is a tape automated bonding (TAB) carrier, this limitation is a statement of intended use of the carrier which does not result in a structural difference between the claimed carrier and the carrier of Hatada. Further, because the carrier of Hatada has the same structure as the claimed carrier, it is inherently capable of being used for the intended use as a TAB carrier, and the statement of intended use does not patentably distinguish the claimed carrier from the carrier of Hatada.

Also, although Hatada does not appear to explicitly teach the process limitation, "said release layer is formed from a material selected from the group consisting of polyimide and parylene," this process limitation does not structurally limit the product of Hatada, and the product of Hatada could be made by the process or another process. To further clarify, the process does not limit the product to any particular structure, such as "polyimide or parylene," because it merely recites precursor materials which are not necessarily present in the final product.

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Claims 26 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatada as applied to claims 26 and 38 *supra*, and further in combination with Chen (6307721).

Hatada does not appear to explicitly teach the limitation, "said release layer is formed from a material selected from the group consisting of polyimide and parylene."

Still, at column 6, line 47 to column 7, line 29, Chen teaches a release layer formed from polyimide. In addition, it would have been obvious to substitute the polyimide release layer of Chen for the release layer of Hatada because it would provide a release layer suitable for its intended use.

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatada as applied to claim 32 *supra*, and further in combination with Moore (5281684).

Hatada does not appear to explicitly teach wherein the at least one microbeam further comprises a solder dam.

Nonetheless, at column 3, lines 17-30, Moore teaches wherein at least one microbeam 26 comprises a solder dam 28. Moreover, it would have been obvious to combine the teachings of Moore and Hatada because it would provide solder bump connections and prevent solder from wetting along a portion of the microbeam.

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Claims 25-28, 31, 32, 36, 39, and 43-48 are rejected under 35 U.S.C. 102(b) as being anticipated by Little (5665648).

At column 3, lines 18-54; column 4, lines 65-68; and column 8, line 16 to column 9, line 55, Little teaches the following:

A microbeam assembly adapted to form interconnects between integrated circuit bond pads and substrate contacts, the microbeam assembly comprising: a carrier 20; a release layer 40 located on said carrier, said release layer being etchable; and a plurality of conductive microbeams 220 releasably bonded to said release layer, wherein the conductive microbeams are sized and spaced to mate with the bond pads 36 of an integrated circuit 22, and wherein said microbeams are releasable from said carrier by at least partially etching away said release layer, wherein the carrier is inherently substantially rigid, wherein the carrier comprises fan-out conductors 224, wherein at least one microbeam comprises a bump 224, wherein the bump is comprised of solder "Au," wherein said fan-out conductors are located on a first region of said carrier and said release layer is located on a second region of said carrier, wherein said conductive microbeams are releasably bonded to said release layer and are in electrical communication with said fan-out conductors.

A microbeam assembly adapted to form interconnects between integrated circuit bond pads and substrate contacts, the microbeam assembly comprising: a carrier; a plurality of fan-out conductors located on a first region of said carrier; a release layer located on a second region of said carrier; a plurality of conductive microbeams located on said release layer, wherein each of said conductor microbeams is in electrical communication with at least one of said fan-out conductors, wherein said fan-out conductors are located on a first region of said carrier and said release layer is located on a second region of said carrier and at least partially surrounds said fan-out connectors, wherein at least one of said conductive microbeams is located on said release layer and extends at least partially onto one of said fan-out conductors, wherein at least one of said fan-out conductors is adjacent to said release layer and at least one of said conductive microbeams is located on said release layer and extends at least partially onto one of said fan-out conductors, wherein said release layer is etchable and said microbeams being releasable from said carrier by at least partially etching away said release layer.

Little does not appear to explicitly teach that the fan-out conductors are for electrical testing of an integrated circuit connection to the

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microbeams, wherein the at least one microbeam comprises a solder dam, and wherein the carrier is a tape automated bonding (TAB) carrier.

Regardless, these limitations are statements of intended use which does not result in a structural difference between the claimed product and the product of Little. Further, because the product of Little has the same structure as the claimed product, it is inherently capable of being used for the intended uses, and the statements of intended use do not patentably distinguish the claimed product from the product of Little.

Also, although Little does not appear to explicitly teach the process limitation, "said release layer is formed from a material selected from the group consisting of polyimide and parylene," this process limitation does not structurally limit the product of Little, and the product of Little could be made by the process or another process. To further clarify, the process does not limit the product to any particular structure, such as, "polyimide or parylene," because it merely recites precursor materials which are not necessarily present in the final product.

Claims 26 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Little as applied to claims 26 and 38 *supra*, and further in combination with Chen (6307721).

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Little does not appear to explicitly teach the limitation, "said release layer is formed from a material selected from the group consisting of polyimide and parylene."

Notwithstanding, at column 9, lines 41-43, Little teaches that the release layer can be "other release materials," including photoresist. Moreover, at column 6, line 47 to column 7, line 29, Chen teaches that photoresist and polyimide are release layer equivalents. Therefore, it would have been obvious to substitute the polyimide of Chen for the photoresist of Little.

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Little as applied to claim 32 *supra*, and further in combination with Moore (5281684).

Little does not appear to explicitly teach wherein the at least one microbeam further comprises a solder dam.

Nonetheless, at column 3, lines 17-30, Moore teaches wherein at least one microbeam 26 comprises a solder dam 28. Moreover, it would have been obvious to combine the teachings of Moore and Little because it would provide solder bump connections and prevent solder from wetting along a portion of the microbeam.

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Applicant's amendment and remarks filed 3-18-3 and 7-16-3 have been fully considered, are addressed by the rejections *supra*, and are further addressed *infra*.

Applicant's assumption that a typographical error resulted in the misidentification of claim 5 instead of claim 25 as a generic claim is correct. Claim 25 should have been identified as generic.

Applicant's argument that claims 25 and 43 are generic to all of the species claims is incorrect. Instead, claim 25 is generic only to those species claims dependent thereon, and claim 43 is generic only to those species claims dependent thereon because both claims 25 and 43 contain limitations not present in the other; hence, all of the species claims dependent on claims 25 and 43 do not contain all of the limitations of both claims 25 and 43. To further clarify, as set forth in MPEP 806.04(d), "For the purpose of obtaining claims to more than one species in the same case, the generic claim cannot include limitations not present in each of the added species claims. Otherwise stated, the claims to the species which can be included in a case in addition to a single species must contain all the limitations of the generic claim."

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The art made of record and not applied to the rejection is considered pertinent to applicant's disclosure. It is cited primarily to show inventions similar to the instant invention.

Any telephone inquiry of a general nature or relating to the status (MPEP 203.08) of this application or proceeding should be directed to Group 2800 Customer Service whose telephone number is 703-306-3329.

Any telephone inquiry concerning this communication or earlier communications from the examiner should be directed to David E. Graybill at (703) 308-2947. Regular office hours: Monday through Friday, 8:30 a.m. to 6:00 p.m.

The fax phone number for group 2800 is (703) 872-9306.



David E. Graybill
Primary Examiner
Art Unit 2827

D.G
10-Nov-03